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19 June 1992

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If you would like more information on previously published Research Bulletins, please contact your local INPUT organization.

Sincerely,

Peter Lines

Peter Lines
Vice President

Enclosure

March 1992
Vol. III, No. 1
Route to: SESIP

INPUT® Research Bulletin

A Publication from INPUT's Systems Integration Programme—Europe

Growth in Imaging Systems Integration Stimulated by Moves to Case Handling and Office Automation

Until recently, imaging systems have been considered too expensive to justify their widespread use. Historically, the main application of imaging has been for long-term document storage and retrieval where a stand-alone system could be cost justified on the basis of space savings.

However, the cost of imaging systems is continuing to fall rapidly and imaging systems are now being more fully integrated into production systems, giving rise to the high growth rate for imaging systems integration forecast in Exhibit 1.

Exhibit 1

Systems Integration Market
Imaging Systems, Europe

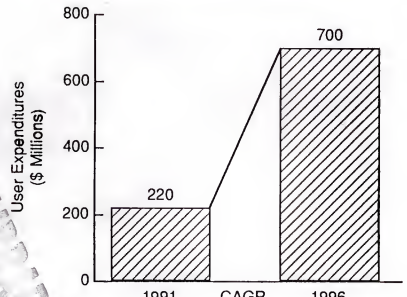

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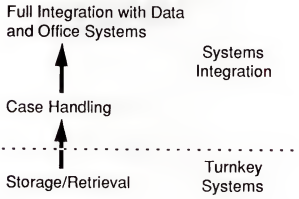
Exhibit 2

Market Evolution
Imaging Systems Integration
Europe



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This growth, which represents a major opportunity for vendors, is being generated by the evolution of the market, shown in Exhibit 2, towards:

- Case handling applications
- Full integration of imaging systems with data processing and office automation

Simple document storage and retrieval applications are not considered to be part of the systems integration market, but have often been an important first stage for users. Such projects enable users to gain expertise and familiarity with imaging systems and also to build up a backlog of imaged documents to which applications such as case handling can later be applied.

The next step for many users, and the stage characteristic of the imaging systems integration market at the present time, is work flow or case handling applications. In case handling applications, imaging is used to re-engineer the business processes relating to a particular paper-intensive department of a company. The most common applications are those dealing with correspondence from the general public.

The financial services sector has been by far the most significant user of imaging technology for case handling applications, particularly the insurance sector. Within the insurance sector, imaging technology has been most readily applied to services where client details are retained for periods of 20 years or more, such as:

- Life assurance
- Pensions
- Mortgages

Although case handling techniques offer considerable benefits to the general insurance sector in terms of increased productivity and higher levels of customer service, the insurance sector has been much slower to adopt imaging in support of its general business compared to its life business. However, as the productivity benefits that can be achieved become clearer to users, and as case handling software becomes more sophisticated, the adoption of imaging by general insurance business units is forecast to increase significantly.

In the public sector, it is forecast that case handling will also be widely used for the administration of taxation. A number of councils in the United Kingdom are already

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using imaging systems in support of the collection and administration of local taxation. Case handling also has a significant role to play in the health sector and in public utilities.

Vendors targeting case handling in Europe include IBM, Olivetti Systems and Networks, Wang and Philips.

Philips Information Systems, which was acquired by Digital in November 1991, was one of the first vendors to recognise the potential of imaging and has been marketing its Megadoc imaging system since 1983. By 1991, Philips claimed to have installed over 250 Megadoc systems across Western Europe. However, Philips recognised that the rate of adoption of imaging was slow and that the equipment market was evolving towards open systems. Accordingly, Philips developed a sophisticated case handling software product, ECHO, for launch in January 1992. ECHO has been initially implemented on Sun platforms, but this may change following Philips' acquisition by Digital. Pilot projects have been implemented at Commercial Union in Birmingham and Delta Lloyd in the Netherlands.

Philips recognised the importance of talking to user top management about business process re-engineering rather than imaging technology, but may, on its own, have lacked the consultancy reputation and the major account base to exploit ECHO's capabilities fully.

Olivetti Systems and Networks has been marketing the FileNet imaging system in Western Europe to address case handling applications for a number of years. In the United Kingdom, Olivetti has roughly 20 FileNet clients.

However, a number of vendors—including, for example, Olivetti Systems and Networks and IBM—believe the time is now ripe to introduce imaging capability into their general-purpose office automation offerings. In these instances, imaging is being integrated with applications such as word processing, spreadsheets, personal databases and electronic mail.

Olivetti is placing much of the emphasis on its product IBISYS, which resides on a UNIX server and works in conjunction with a wide range of word processing, spreadsheet, and personal database packages. Images can be transmitted by electronic mail and incorporated in reports.

Similarly, IBM has recently incorporated imaging into an office automation offering on its RS/6000 platform.

Finally, imaging is starting to be incorporated into standard data processing applications. For example, as a complementary approach to the market, Wang is building a wide range of image enabling tools that it is encouraging applications software products vendors to incorporate into their products.

One example of an applications software products vendor that is image enabling its products is Computer Associates.

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INPUT®
Research
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Route to:

A Publication from INPUT's Systems Integration Programme Europe

Digital's Large Account Systems Integration Approach

Digital's historical approach to the market has been to provide hardware and software products which have applied to the client's business either by their in-house IS function or by one Digital's numerous Complementary Solutions Organisations (CSOs). This left the business knowledge of the client either in-house or within the CSO.

However the role of the in-house IS function is clearly changing and clients are increasingly requesting vendors such as Digital to take prime responsibility for the provision of complete solutions to business problems. Clients naturally expect vendors to have a thorough understanding of the business issues they face.

In line with this changing scenario, Digital is establishing systems integration as the basis of its approach to large accounts. This entails:

- Separating the company's product business from its systems integration business
- Enhancing industry sector focus
- Developing the company's image as a service provider.

Separation of Product and Systems Integration Businesses

Digital is separating its business into two main strands, as illustrated in Exhibit 1:

- A commodity products business delivered largely through indirect channels
- Systems integration delivered through account managers to the major organisations.

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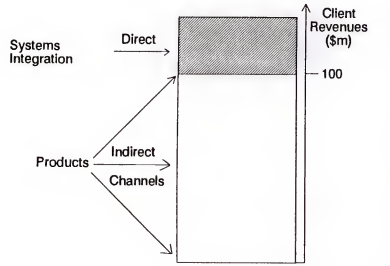
Exhibit 1

Digital : Business Strategy



The major organisations targeted through account managers are essentially the leading 500 organisations in Europe together with their subsidiaries. Small and medium-sized enterprises (SMEs) are defined by Digital as organisations with revenues less than $100 million. These SME's will be targeted largely through a network of value-added resellers.

Within large companies, Digital sees in-house development decreasing in favour of a polarisation towards the use of standard turnkey packages on one hand and greater use of systems integrators on the other.

Digital perceives the major driving forces ensuring large companies to adopt systems integration to be:

- An increasing desire to subcontract activities which are not perceived to be part of the core business
- The increasing complexity of information systems and the tendency towards multi-vendor solutions
- The increasing dependence of businesses on their core information systems.

Digital is now Targeting 25 Industry Sectors

From 1st July, 1992, Digital is re-organising its account management in Europe under 25 Industry Enterprise Managers each responsible for a particular vertical market. If only in marketing presentation, this increased focus should give Digital a significant advantage over many of its competitors with their less focused sector targeting. Detailed industry-specific knowledge together with the ability to supply the key building blocks relevant to that sector are increasingly the prime determinants of success in the systems integration market.

The Industry Enterprise Managers will operate at a European rather than a national level. This means that from July 1st, the industry organisation will take precedence over the geographic (national) organisation now in place. This will assist Digital in targeting multinationals operating across Europe, and will also assist the effective utilisation of Digital's industry experts.

Digital's relationship with its CSO's is also changing in nature. Historically the CSO provided the industry expertise in the partnership and was the prime contact with the customer. Now Digital is developing its own business knowledge and seeks to be the prime contact with the client. Digital then subcontracts to the appropriate application provider.

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Digital claims to be currently strongest in the following sectors:

- Manufacturing
- Utilities
- Financial Services
- Telecommunications
- Public Sector.

Developing Digital's Image as a Service Provider

Digital's principal challenges in meeting the company's declared aim of becoming the leading systems integration vendor are listed in Exhibit 2. The company's major challenge is to change the way it is viewed by its clients. Digital wishes to be seen as a services company possessing a high level of understanding of its client's businesses. At present the company is primarily viewed as an equipment vendor.

Exhibit 2

Future Challenges : Digital

- Services Company Image
- Consultative selling
- More precise vertical focus
- Increase prime contractor role
- Acquisitions to fill capability gaps

The key to this change in image are Digital's account managers and business consultants. The account managers in particular may need to enhance their understanding of their clients' businesses and develop their consultative selling skills.

Digital perceives that it requires three core skills for the systems integration market, namely:

- Business Consultancy skills
- Solution Architect skills
- Project Management skills.

By "solution architect" skills, Digital means the ability to analyse a business problem and identify and design an IS system to tackle that specific business need.

However Digital is also being careful not to alienate the management consultants and systems integrators who remain important partners such as EDS, Andersen Consulting, and Logica. Digital expects these companies to remain important prime contractors using Digital as a major subcontractor. However as Digital's expertise as a prime contractor increases, then so will the proportion of systems integration projects where Digital assumes this role. For example, Digital would already frequently expect to be the prime contractor in areas such as financial trading systems and office systems where the company has a high level of capability.

Digital will further increase its potential to act as systems integrator in emerging application areas by acquisition of suitable vendors. However the company is unlikely to target established application areas as part of its business development process.

Similarly, Digital is being careful not to alienate its traditional clients within the in-house IS function. Unlike a number of leading systems integrators, Digital is not trying to bypass the IS department. However the company does recognise the increasing need to work with business management rather than the IS function.

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SESIP

Route to:

INPUT® Research Bulletin

A Publication from INPUT's Systems Integration Programme—Europe

Selective Bidding—A Key to Systems Integration Profitability

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For a systems integration project to be considered successful by both users and vendors it needs to meet the following criteria:

- Satisfy the business need for which the project was initiated, to the user's satisfaction
- Be completed on time.

The vendor however is operating under a further major restriction—the need to make a profit from its systems integration activities or business unit. To achieve this latter goal, vendors must

- Match their competitors' bidding hit rates
- Identify those situations where their competitive position is poor
- Improve their influence within key accounts.

Hit Rates Must Exceed 30%

A failure to match the industry "hit rates" shown in Exhibit 1 could result in either significant losses or, equally unacceptable, the need to submit proposals that risk being uncompetitive in an attempt to recover costs.

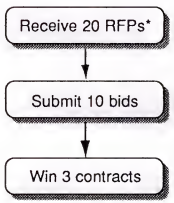
Conversely a vendor exceeding this hit rate can be more price competitive than other vendors.

The typical cost to a vendor of submitting a proposal for a systems integration project is approximately 6% of the total project cost. If a vendor typically wins 3 out of every 10 bids, then each project will need to carry a 14% margin over and above total project costs—where total project costs already include the bidding costs for that individual project—just to cover the cost of other unsuccessful bids.

Should the vendor's success rate slip to a ratio of one in five successful bids, then a 24% margin would be required just to cover bidding

Exhibit 1

Bidding Hit Rates



*RFP = Request for Proposal

Source: INPUT

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costs. This would place the vendor in an uncompetitive position.

Accordingly, vendors are constantly striving to improve their hit rates and to qualify out any situations in which they are unlikely to be successful. Many vendors use extensive intelligence gathering prior to making the bid/no bid decision to establish their chances of success.

Understand Your Competitive Position

The main criteria for vendors declining to bid on systems integration projects are listed in Exhibit 2.

Exhibit 2

Why Vendors Decline to Bid

- Weak competitive position
- Known bias of decision makers
- Profit potential
- Importance of account

Source: INPUT

The decision whether or not to bid is principally based on the probability of the vendor winning the deal. For example, in some instances it is clear that the user is only going through the appearance of competitive tendering and has a strong preference for a particular vendor with which the user may have an established relationship. In other circumstances, it may be clear that a particular competitor has a strong competitive edge due to experience with similar projects or has access to especially appropriate building blocks such as application software products or kernels around which the solution can be delivered.

Another important factor is the profit potential of the contract. If the potential for a reasonable margin is being squeezed by either the client or the competition, then vendors may decline to submit a proposal. However this varies according to the perceived importance of the client or the importance attached to penetrating the industry sector. In extreme cases, vendors may submit bids merely to maintain the relationship with the prospect, ensuring their inclusion in future Requests for Proposals.

Most vendors are prepared to submit bids that only achieve financial break-even where a key account or key sector is involved.

Overall, the degree of risk in the project itself is not one of the major influences in persuading vendors to decline to submit a proposal. It is estimated that vendors only reject approximately 10% of Requests for Proposals on such grounds. In these circumstances, vendors typically try to manage the risk either by converting the client to a new approach or by pricing at a level that takes the known risks into account.

Establish High-Level Business Credibility

The major challenge for the majority of systems integration vendors in Europe is to establish high-level business credibility. The benefits of establishing this rapport with senior executives are demonstrated by the high growth rate—over 30% per annum—exhibited by the most successful proponent of this approach in Europe—Andersen Consulting.

Andersen Consulting enjoys a somewhat unique marketing position among leading systems integrators through its ability to formulate client requirements. Andersen Consulting frequently "writes" the Request for Proposal (RFP), at least in the figurative sense. Andersen Consulting's business consulting skills often give it entry to the prospect's environment long before a solution or even, at times, the problem, has been defined.

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The result is a very high success rate in winning contracts, which minimises marketing and bid preparation costs. This in turn further improves the organisation's competitiveness.

Operating from a high-level position as a consultant, Andersen Consulting has often closed the business before it has been opened, as its recent contract with the London Stock Exchange has demonstrated.

This $100 million contract was awarded to Andersen Consulting after it carried out a review of the Stock Exchange's IS operations on behalf of its chief executive officer.

Other vendors are endeavouring to emulate this approach. For example, the formation of Gemini Consulting represents Cap Gemini Sogeti's attempt to build synergy between management consulting and systems development capabilities. If this succeeds, it will have a positive impact on Cap Gemini Sogeti's systems integration competitiveness and its profitability.

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Route to:

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Vendors Influence only 27% of Specifications for IS Projects

As a general rule, both users and vendors would agree that systems integration vendors' project management capabilities are such that vendors can reliably deliver against an agreed specification.

Problems are more likely to occur where vendors deliver to the requested specification but then find that this is not sufficient to meet the organisation's business need. This can be caused by a number of factors such as:

- The inadequacy of the initial specification
- The evolution of the business requirement while development is underway
- The differing requirements of the various departments within the client's organisation.

Examples of projects which have run into difficulties for these reasons include the Passport Issuing and Management Information System for the UK government, where the vendor received a flawed specification, and the EFTPOS cashless shopping scheme designed to link the major banks and retailers, which was overtaken by changes in the business environment.

The best way for vendors to protect themselves from such occurrences is to become more involved in the identification of the business need, and take control of the system specification.

The limited extent to which vendors produce the business specifications for systems integration projects is identified in Exhibit 1.

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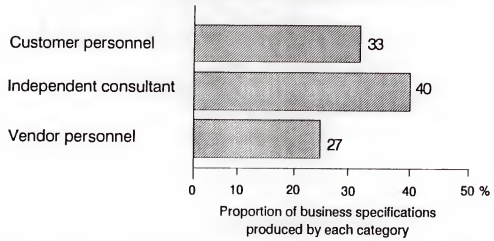
Exhibit 1



This indicates that independent consultants play the major role in developing the business specifications for systems integration projects, with systems integration vendors in third place behind the client's own personnel. Indeed in the majority of systems integration projects, vendors are expected to quote against a pre-defined specification.

Accordingly vendors need to develop further their abilities to control the production of the business specification. The keys to achieving this are:

- The image of their account managers
- The introduction of their own consultants and methodologies into key accounts.

Develop Consultative Selling Skills

The major challenge for many equipment vendors and professional services vendors is to develop the consultative selling skills of their account managers. In particular, the emphasis within many equipment vendors has been on selling products to IS management. This emphasis must now change so that the vendors are now perceived as services organisations capable of participating in business process re-engineering.

The perception of the key participants in the buying process within client organisations exhibited by equipment vendors, professional services vendors, and management consultants is shown in Exhibit 2.

Exhibit 2

Systems Integration, Europe
Key Participants in Buying Process

Player \ Vendor Type	Equip. Vendors	Prof. Serv. Vendors	Mgmt. Consult.
Client board-level personnel	High	Med.	Very High
Head of IS	High	V. High	Med.
Client middle mgmt.	Low	High	Med.

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Clearly the management consultancies attach the most importance to developing relationships with senior management and assisting them to tackle their business problems. There is a strong correlation between this approach and their high level of involvement in writing business specifications.

The establishment of a consultative relationship with the client has a number of advantages for vendors including:

- Risk reduction by providing the vendor with a deeper insight into the client's business
- Reducing the level of competition, and competitors' access to large projects.

Use Proprietary Consulting Methodologies

Digital, like a number of other systems integration vendors, has recently formed a number of Consulting Services units in Europe. These units use a service called Technology and Organisational Performance (TOP) consultancy. While this service is currently only used to develop specifications in a small proportion of Digital's projects, it illustrates the manner in which Digital is endeavouring to become more involved in business process re-engineering, and hence take control of the business specification, for new IS systems.

Digital's TOP consultancy process attaches importance to the involvement of business managers from a range of departments within the clients' business. These managers work together over a period of days to develop cross-functional perspectives of their business processes and information flows. This provides a basis for the redesign of business processes to meet corporate objectives and assist in identifying the information systems appropriate to support these new processes.

Such an approach, where used, puts Digital in a strong position to develop a good understanding of the client's business processes and hence assess the level of commercial risk in going ahead with a systems integration project. It also puts Digital in a strong position to capture the business, possibly without the need for competitive tendering.

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Route to:

INPUT® Research Bulletin

A Publication from INPUT's Systems Integration Programme Europe

Downsizing Reduces IS Staffing by 40%

Downsizing often has a major impact on the roles played by the IS department and senior end user executives. Indeed it can be difficult to decide whether downsizing is the cause of this change in roles or merely provides, for the first time, the technological base upon which these desired chances can be implemented. What seems clear, is that the impact of downsizing on the role of the IS Department depends to a large extent on the calibre of the individual IS department and the level of service it has provided to end users in the past.

This research bulletin considers the impact of downsizing:

- on the role of the in-house IS department
- on the role of end users.

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Successful IS Departments place more emphasis on Business Analysis

On average, downsizing from a mainframe or mainframes to mid-range equipment leads to a reduction of 40% in the number of personnel employed within the IS department. Typical reductions in in-house IS staffing range from 30% to 50% of personnel employed though there are extreme examples where much larger reductions in staffing, in some cases in excess of 90%, have been made.

The category of personnel most at risk are mainframe computer operations personnel including both computer operators and systems engineers. In many instances, these personnel are made redundant as a result of downsizing. However, in approximately 25% of downsizing exercises, the company transfers responsibility for the run-down of the mainframe-based service to an outsourcing vendor.

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Other groups of personnel adversely impacted by downsizing are data preparation personnel and junior programming staff.

The reason for the impact on junior programmers is the changing role of the IS department described in Exhibit 1.

Exhibit 1

Changing Role of IS Department Downsizing, Europe

- Developing closer relationships with user departments
- Greater decentralisation
- More emphasis on business/systems analysis
- Less emphasis on systems development

In the overwhelming majority of cases, downsizing is accompanied by the building of a closer relationship between the IS department and its clients. However, the nature of the relationship depends upon the calibre of the in-house IS department and the degree of influence it has managed to retain over the organization's IS strategy and systems development activity.

At one extreme, the IS department manages to retain control of the organization's IS strategy and system specifications, though this is increasingly likely to involve the use of mixed teams of end users and IS personnel. Also proposed developments are increasingly likely to be prioritised through a steering group involving the principal directors of the company. However in these instances a central IS budget, managed by the IS department, is often retained.

At the other extreme, responsibility for both IS budgets and the derivation of systems specifications are completely transferred to divisional managers outside the IS department. In these instances, IS personnel are often transferred to the end user divisions to support end users in identifying their requirements and procuring the appropriate systems. A central IS department is often retained with responsibility for managing the organization's IS infrastructure as a whole, but this tends to be a small team of people with a comparatively low level of influence. As a result, some organisations report a level of information systems 'anarchy' arising on downsizing, analogous to the situation that occurred when end users first discovered they could by-pass the IS department in the purchase of personal computers.

Regardless of which of these models is adopted, organisations are placing more emphasis on business/systems analysis and less emphasis on low-level systems development such as programming. Even where the in-house IS department has retained considerable influence, it increasingly sees its role as working closely with end users to identify business needs and propose the types of system which could meet this need. The role of the pure in-house programmer is disappearing as IS departments recognise the merits of analysts and analyst/programmers in serving their internal clients and the merits of application software products and external professional services in effecting a rapid implementation of the systems identified.

Where the end user has acquired responsibility for the identification and procurement of information system support, it is even more unlikely that in-house IS personnel will be involved in bespoke development. Their role will become that of technical advisers in the specification and procurement process with all development activity being subcontracted to external vendors.

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End Users Acquire Control of the IS strategy

The influence of end users, i.e. senior managers from outside the IS department, in the specification and procurement of information systems is steadily increasing as suggested in Exhibit 2.

Exhibit 2

Changing Role of End Users Downsizing, Europe

- Acquiring control of IS Strategy
- A major force in application software product selection
- Taking over the IS budget

End users are steadily acquiring control of the organisation's IS strategy. Frequently this involves having a steering committee, typically chaired by the chief executive officer or financial director and attended by all the company's principal divisional or functional directors, which decides the nature and priority of each proposed information systems development. Representatives from the IS department may be only retained on this committee as technical advisers.

In addition, the IS budget is increasingly controlled either by this senior management steering committee, or by end user division or departments. Along with this allocation of budgets to divisional managers comes a greater responsibility for system specification and the selection of application software products. Downsizing typically marks a watershed in the change from the in-house developed bespoke systems to use of application software products, and divisional managers are increasingly at the forefront in the choice of application software product.

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INPUT® Research Bulletin

Route to:

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IBM AS/400 has been the Main Beneficiary of Downsizing

Exhibit 1 identifies the equipment architectures favoured by companies which have downsized from mainframes over the past few years.

Exhibit 1

Favoured Architectures Downsizing, Europe

Architecture	Proportion of Migrations (%)
IBM AS/400	40
Unix-based	35
Digital Vax	12
Other proprietary	13
Total	**100**

Until now, the IBM AS/400 has been the architecture most favoured by organisations as a target architecture in downsizing, closely followed by Unix-based systems. To understand how this profile of favoured architectures may change in the future it is necessary to clarify:

- Organisations' motivations for downsizing
- The key participants in the decision to downsize
- The bases for selection of the major competing architectures.

Cost Reduction is the Major Motivation

Exhibit 2 illustrates the principal motivations for downsizing of organisations which have already downsized a significant proportion of their applications, if not all their applications, from mainframe-based systems.

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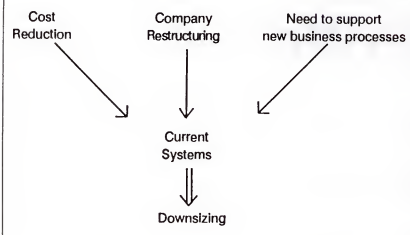
Exhibit 2

Driving Forces Downsizing, Europe



The overwhelming concensus amongst users is that the need to reduce IS costs was a major, and typically the major, factor behind the decision to downsize. Indeed, one organisation stated that while over the past four years the company's total information systems expenditure had increased fourfold, the finance director was no longer prepared to see this trend continue and was demanding that the information systems budget now be reduced. In other instances, the desire to downsize the information systems budget reflected an overall downsizing of the organisation with the overall workforce being reduced, and possible site closures.

However if the need to reduce costs were to exist in isolation then there are other alternatives besides downsizing available to companies and their in-house IS management including:

- Outsourcing of platform operations
- Moving to "lights out" operations
- Cessation of all development activity.

While these are all happening to a certain extent and are appropriate in particular individual circumstances, downsizing remains the dominant means of achieving cost reduction. This is because cost reduction is not the only requirement. Simultaneously many organisations are restructuring, often decentralising, their operations to improve their business processes and provide higher levels of local autonomy within their organisations. This means that there is often a mismatch between the centralisation of the information systems used and the decentralisation of the company's operations. Downsizing from mainframe-based systems to distributed mid-range systems, or even personal computer based local area networks, offers a means of achieving greater consistency between the company's new organisational structure and the structure of the information systems which support it.

Allied to this, companies are developing new business processes in endeavours to develop increased competitive advantage in a highly competitive business environment. This frequently involves developing IS applications which assist employees working at the customer interface. While centralised databases are still appropriate in some of these cases, for example airline booking systems, distributed systems are increasingly popular for this type of application.

Overall the cost pressure on companies' in-house IS spending should not be associated with a lack of need for new systems. Indeed the cost pressure is typically accompanied by a need for new systems which provide improved support to a new company organisation and new set of business needs. However the current expectation is for these new systems to be much cheaper to implement, run, and maintain than the systems that are to be replaced.

Finance Director is the Principal Initiator of Downsizing

Exhibit 3 summarises the degree of influence of each of the main participants in an organisations decision to downsize.

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Exhibit 3

Who Drives Downsizing?
Europe

Personnel	Degree of Influence
CEO	Medium
Finance Director	High
IT Director/DPM	Low

The budget pressure placed on the IS department by senior management is the principal stimulant to downsizing. While this pressure may emanate directly from the chief executive officer, the in-house IS management typically receives an instruction to reduce its budget from the finance director.

In many cases, the IS department will retain control of the identification of the organisation's new requirements and retain control of vendor selection. However responsibility for IS expenditure and vendor selection is increasingly being transferred to senior management outside the IS department. So overall the balance of power in vendor selection is moving away from the IS department, and downsizing is often accompanied by a major shift in purchasing influence from the IS department to end users.

Application Software Product Base favours IBM AS/400

As shown in Exhibit 1, the principal recipients of downsized applications are the IBM AS/400 and Unix-based equipment which between them accounted for 75% of the downsized equipment base. Indeed it is probable that their share of the equipment base will continue to increase as the importance of "other proprietary" systems and even that of the Digital Vax fade over the next few years.

In terms of their propensity to choose the IBM AS/400 or Unix-based systems as their target equipment architecture, there appears to be little variance between prior users of IBM mainframes and prior users of non-IBM mainframes. Non-IBM mainframe users, with prior experience of, for example, Unisys or ICL mainframes, have a similar overall propensity to adopt the IBM AS/400 while many former IBM or IBM-compatible mainframe users have adopted Unix-based equipment on downsizing.

The key factors in the choice of target platform are:

- The price/performance of the equipment
- The availability of suitable application software products
- Desire for vendor independence.

Clearly some users are still driven by a corporate policy which dictates they will only use equipment from IBM or will only use Unix-based equipment. This latter decision is typically driven by a desire to ensure a high level of vendor independence in future in both equipment and software purchasing decisions.

However the majority of companies which have undergone downsizing do not appear to have been operating under such policy restraints. In these cases, the choice has typically been based on price/performance of the equipment followed by a search for suitable application software products to run in this environment or a search for the most appropriate application software products which then narrowed down the choice of equipment available.

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For example, some companies are predominantly concerned with cost reduction. Accordingly their principal selection criterion is often price/performance with detailed studies being carried out to assess the price/performance of both the IBM AS/400 and Unix-based equipment such as the IBM RS/6000. In many instances, Unix-based equipment was chosen because of its higher perceived price/performance.

In other instances, responsibility for IS purchasing was devolved to the end users, and user teams were largely responsible for the selection of suitable application software products. Their choice of application software products then identified the most appropriate equipment to be used.

At present, the AS/400 is likely to be chosen because of the breadth of its application software product portfolio, while Unix-based systems are more likely to be chosen on the basis of price/performance. However as both the breadth and the quality of the application software products available under Unix increases, then it is forecast that the proportion of systems downsized to Unix will increase at the expense of the IBM AS/400.

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Route to:

INPUT® Research Bulletin

A Publication from INPUT's Systems Integration Programme—Europe

Data Sciences Aims To Become A European Leader In Systems Integration

Although its activities are currently primarily concentrated in the United Kingdom, Data Sciences' mission is to become one of the European leaders in:

- Systems integration
- Outsourcing (systems operations)
- Technical consultancy

In order to achieve its goal within the systems integration market, the company needs to:

- Expand its industry sector coverage of the systems integration market
- Expand its geographic coverage
- Strengthen its partnerships with the leading equipment vendors

Expanding Its Activities in Civil Government and Finance

Data Sciences' divisional structure is shown in Exhibit 1 (see page 2).

The prime activities of the two largest divisions are as follows:

- The Datacentre Services Division is the company's systems operations unit. It includes direct marketing and media services, disaster recovery and contingency planning, IS strategic consultancy and data centre consultancy.
- The Systems Division caters for Data Sciences' project activity and is further subdivided as shown in Exhibit 1.
  - Finance & Business Systems covers dealing, trading and settlement systems, unit trust and mutual funds, retail financial services, payment systems, taxation and insurance, retail, hotels and leisure, payroll and personnel, distribution and accounting.
  - Government and Defence covers defence-related systems, environment and space, government, public administration, command and control, air traffic control, training systems, trusted systems and software technology.

Data Sciences' estimates of its systems integration revenues by industry are provided in Exhibit 2 (see page 2).

Data Sciences holds a strong position within the defence sector, particularly for the U.K. Ministry of Defence (MoD). However, it is probable that spending by the defence sector will decrease over the next few years as the U.K. government endeavours to reduce defence spending overall.

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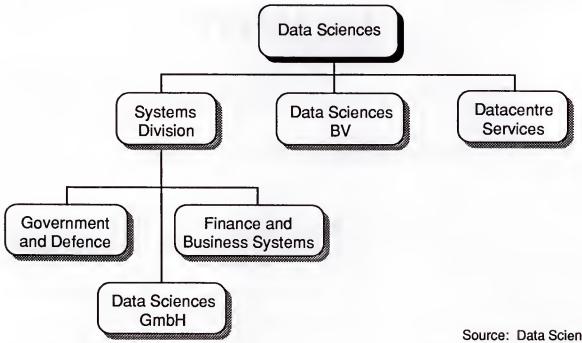
Exhibit 1

Divisional Organization Chart
Data Sciences



Source: Data Sciences

Exhibit 2

Data Sciences' Key Markets
Systems Integration, Europe

Sector	Revenue ($M)	Percent
Defence and Aerospace	55	45
Manufacturing/ Industry	6	5
Commercial/Retail	18	15
Banking, Finance, and Insurance	18	15
Government	24	20
Total	121	100

Source: Data Sciences

Accordingly, Data Sciences must develop its systems integration business in new sectors. The obvious target sectors are national and local government in the U.K., where spending on systems integration is expected to increase substantially and where Data Sciences has an established presence.

Examples of Data Sciences' systems integration projects are shown in Exhibit 3.

Systems for the financial services sector currently account for 21% of Data Sciences' overall revenues. In this sector, Data Sciences has a range of kernels and building blocks to assist in its provision of systems integration solutions. The company's principal applications software products for this sector are listed in Exhibit 4.

Outside the defence, finance, distribution and leisure sectors, Data Sciences' applications software product portfolio is less extensive,

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Exhibit 3

Major Systems Integration Projects
Data Sciences

Client	Project	Value ($M)
MoD	Secure database/office automation system	56
Post Office (U.K.)	Automation of 250 post office counters	32
U.K. Navy	Type 42 Frigate shore development facility	28
Passport Office (U.K.)	Passport issuing system	21
Earth Observation Data Centre	System to process satellite data	17
Rotterdam Harbour (NL)	Vessel traffic management system	9
Automobile Association (U.K.)	National command and control system for vehicle breakdown services	7

Source: Data Sciences

Exhibit 4

Principal Applications Software Products
Data Sciences, Banking and Finance

Product	Description
VALUTA-IDS	Integrated dealing room systems
THREADS	Unit trust management administration system
COLT	Securities dealing system
POSTS	Settlement system for securities and related tracking
ACTION 2000	Credit card and merchant accounting, financial switching, ATM management and card issue
CFRS	Consolidated financial reporting system
SPOT	Automatic settlement of foreign payment transactions

Source: Data Sciences

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and the company is more reliant on strategic partnerships with vendors of suitable products.

Data Sciences is aiming to build up a long-term portfolio of applications software products by partnership to assist it in marketing systems integration more widely.

Expansion of Geographic Coverage

At present, 83% of Data Sciences' overall revenues are derived in the U.K. Outside the U.K., the company has subsidiaries in the Netherlands and Germany. Systems integration is a particular strength of the Dutch subsidiary, which has strengths in manufacturing systems, financial applications, and command and control systems.

The German subsidiary of Data Sciences is designated as a centre of excellence in finance and banking systems. It also focuses on automotive products and process control applications within the motor and electronics industries.

However, if Data Sciences is to become a European leader in systems integration, the company will need to expand its activities within major European markets such as France and Germany. It is difficult to see how this can be achieved by organic means alone.

Strengthened Partnerships with Equipment Vendors

Data Sciences' prime contractor role in systems integration is increasingly under threat, as the financially much larger, major equipment vendors seek to take over this role. However, at present, Data Sciences perceives that it is considerably more experienced in large-scale project management than the equipment vendors. Data Sciences' core competencies are its software development culture and its project management expertise, built up over twenty years of managing complex projects.

Data Sciences needs to establish how its relationships with each of the equipment vendors are best managed and how they will evolve over time.

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Route to:

INPUT® Research Bulletin

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Hewlett-Packard Develops Its Systems Integration Activities To Support Its Computer Systems Business

Hewlett-Packard, like many of its fellow systems vendors, is keen to develop its presence in the systems integration market. The vehicle for expanding its presence is the Professional Services Organization (PSO), formed two years ago from the company's Application Engineering Organisation.

However, in contrast to many of its competitors, Hewlett-Packard's declared rationale for its commitment to systems integration is not primarily to maximise its position within the European systems integration market, but to support its computer systems business. The key elements of Hewlett-Packard's systems integration strategy are:

- To become a world-class open systems professional services provider
- To provide solutions for the manufacturing and telecommunications sectors
- To focus on technology integration

World-Class Open Systems Professional Services Provider

The goal of Hewlett-Packard's Computer Systems Organisation is "to lead the world in open, easy to use, client/server systems." However, this goal becomes more difficult to achieve if the distribution channels providing access to major accounts become dominated by rival equipment manufacturers' systems integration-based account management approaches. Indeed, it may have become impossible for Hewlett-Packard to gain access to large accounts unless it, too, developed its systems integration services.

The difficulties of marketing mainly equipment to Hewlett-Packard's target and major accounts was confirmed by a survey which indicated that:

- Clients would like Hewlett-Packard to offer consulting, system integration, and education services in addition to equipment.
- Equipment sales would be assisted by provision of these services, and adversely affected if these services were not available.
- Hewlett-Packard was perceived as having an advantage over Digital and IBM in providing open systems, client/server solutions.

Accordingly, Hewlett-Packard's newly formed Professional Services Organisation (PSO) offers consulting, systems integration, and education services with the goal of "making Hewlett-Packard's computer strategy successful by making its customers successful with open, client/server systems."

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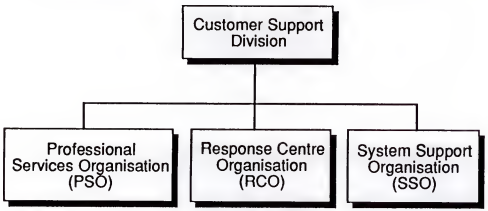
Exhibit 1

Organisation Chart
Hewlett-Packard, Customer Support Division



The position of PSO within Hewlett-Packard's Customer Support Division is shown in Exhibit 1.

PSO provides all professional services, including pre-sales support and project managers for systems integration projects. Software support is now handled by a combination of the Response Centre Organisation and the System Support Organisation (SSO). In addition, SSO handles all field maintenance and environmental services.

PSO is represented throughout Europe, with its revenue base being strongest in Germany.

The key challenges facing Hewlett-Packard in becoming a world-class, open systems, professional services provider are:

- Developing a systems integration support infrastructure
- Developing multinational systems integration support capability

In particular, Hewlett-Packard is keen to develop the talents of its project managers, increase its experience in managing subcontractors, and develop its bid support capabilities.

Providing Solutions for the Manufacturing and Telecommunications Sectors

Hewlett-Packard is currently targetting two industry sectors—manufacturing and telecommunications—in which the company has high levels of knowledge and experience.

The company recognises the need for a strong base of applications software products to support its development of these sectors, and hence the need to develop its long-term relationships with appropriate applications software products vendors. Hewlett-Packard's current partnerships are Software AG, QAD, and Datalogic.

In the manufacturing sector, Hewlett-Packard has its own mechanical CAD product, but is also targetting systems integration projects based on production management applications.

Examples of systems integration projects carried out in Europe by Hewlett-Packard are shown in Exhibit 2.

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Exhibit 2

Example of Projects
Hewlett-Packard, Systems Integration

Sector	Project Purpose
Oil	Executive information systems providing access to IBM, Digital, and UNIX equipment
Process Manufacturing	Implementation of customized production management systems across three countries
Telecommunication	Improve office productivity by integrating IBM Profs, and Digital All-in-One into an open environment

Source: INPUT

Hewlett-Packard also needs to form partnerships with professional services vendors who are prepared to undertake systems development activities as subcontractors to Hewlett-Packard on large projects. In other instances, Hewlett-Packard may itself be the subcontractor on a project. Ideally, Hewlett-Packard needs to develop working relationships with the major professional services vendors such as Andersen Consulting and Cap Gemini Sogeti.

Unlike these vendors, Hewlett-Packard does not offer business consultancy, but sees its role as becoming involved in establishing the linkage between business strategy and information systems, in areas such as transition planning and IS architecture planning.

Focussing on Technology Integration

The principal customer needs identified by Hewlett-Packard are listed in Exhibit 3.

Hewlett-Packard perceives that clients wish to move towards open systems, client/server environments, but in the short to medium term, any systems will have to accommodate, and co-exist with, the client's existing applications. These existing applications have often been developed in-house on proprietary equipment.

However, this co-existence is creating substantial technology/network integration opportunities as clients seek better access to information across distributed systems and organisations. One of the key skills of Hewlett-Packard's systems integration unit is the ability to network widely differing technologies. Another is the ability to assist clients in planning the transition between proprietary and open systems client/server architectures.

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Exhibit 3

Perceived Customer Needs
Professional Services Organization
Hewlett-Packard

- Take advantage of new technologies while protecting current IS investments
- Improve access to information
- Reduce costs of managing and operating information systems
- Technical expertise to supplement own staff

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Downsizing—Major Stimulant to the System Integration Market

Downsizing can have a substantial positive impact on the market for software and services because it is often accompanied by:

- Organizational changes that increase the role of end users in the purchasing process and reduce the influence of the in-house IS department
- Organizational changes that reduce the in-house development capability of the IS department
- The need to realign the majority of the organization's information systems with new organization structures and, possibly, new business processes
- Changes in the equipment architecture upon which the new information systems are based, leading to potential obsolescence of the IS department's existing development capabilities and a consequent greater reliance on external vendors
- A greater reliance on network integration and management skills, which the in-house IS department may have difficulty in resourcing

A good example of the business that can be derived from a downsizing exercise is Hoskyns' work for Imperial Tobacco. At the time of its acquisition by Hansons, Imperial Tobacco was running a large centralised information system service based on IBM mainframes. However, it was felt that a centralised service such as this was fundamentally inappropriate to support the company's new decentralised structure, and a new decentralised IS strategy based around IBM AS/400 equipment was selected.

Hoskyns was chosen to take total responsibility for all aspects of Imperial Tobacco's IS function, which initially included the transfer of Imperial Tobacco's mainframe to Hoskyns' own data centre and the provision of existing mainframe-based services during the transition period. Hoskyns was subsequently chosen to develop and implement the company's new systems on AS/400 equipment.

The impact of downsizing on the demand for external services is shown in Exhibit 1.

Exhibit 1

Opportunities for Vendors

Opportunity	Level of Interest Created by Downsizing
Applications software products	Very High
Bespoke systems development	Medium-High
IS Strategy development	Medium
Network integration	Medium

Source: INPUT

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Although these services may be purchased separately, they can also be purchased in combination, giving a significant boost to the systems integration market.

In particular, downsizing is benefitting vendors with:

- Business and IS strategy consultancy skills
- Industry-specific applications software products on the IBM AS/400 or UNIX-based platforms
- High levels of network integration capability

Increased Consultancy Opportunities

The principal driving forces behind the increased demand for business and IS strategy consultancy are shown in Exhibit 2.

Downsizing is essentially driven by the need to achieve cost reductions while simultaneously taking into account new—typically decentralised—company structures and new business processes. Two constant themes behind these new business processes are continuing reductions in the overall cost of doing business and the need for improved customer service. Hence, IS systems are increasingly being used at the point of service delivery.

However, many existing mainframe-based systems are high cost—both to run and maintain—and remain batch administrative support systems located far from the organization's point of service delivery.

Accordingly, there is an increasing need for management consultancy to assist users in the re-design of their business processes and, in particular, to shift their resources from administrative support to customer service. In conjunction with this, there is a need for vendors to assist companies in identifying how information technology can be used in support of these new business strategies and business processes.

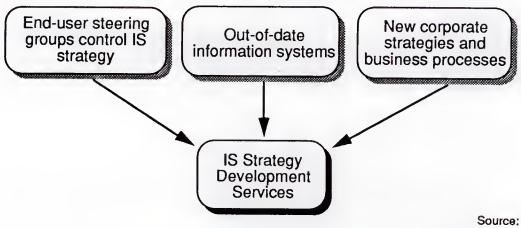
The increasing control of IS strategies by end users—and particularly groups of senior executives—rather than the in-house IS departments further stimulates the need for assistance in strategy development. In the past, the development of IS strategies has typically remained firmly in the hands of the in-house IS department, which was often reluctant to seek external assistance.

Greater Need for Systems Development

The traditional competitors of the professional services vendors have always been the in-house IS departments, which have a

Exhibit 2

Driving Forces
Business and IS Strategy Consulting Services


End-user steering groups control IS strategy
Out-of-date information systems
New corporate strategies and business processes
IS Strategy Development Services

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traditional reluctance to subcontract systems development, except in cases where they lacked the expertise and resources themselves. Indeed, INPUT estimates that in 1991 users still spent $65 billion on in-house IS personnel across Europe, compared to $26 billion on professional services with external software and services vendors.

Undoubtedly, downsizing will lead to a change in this balance of spending, with in-house expenditures decreasing and a greater proportion of systems development being subcontracted.

Downsizing is often accompanied by a significant change in the role of the in-house IS department. This change can be characterized as one of two developments. In some cases, the IS department may completely lose control of the IS budget and IS procurement decisions, these being made the responsibility of end users. In other cases, the IS department may retain much of its influence over IS procurement but find it necessary to protect its position by developing closer links with end users and concentrating more of its resources on business and systems analysis. In this instance, there is typically a shift in emphasis from programming to analysis, with a greater proportion of systems development being accounted for by either applications software products or subcontracted bespoke development.

Applications Software Products Take Precedence

Overall, within the systems integration market there is an increasing tendency for users to request kernels or applications software products as the foundation for systems integration projects. If suitable products can be found—and this is increasingly the case—then this has a number of significant benefits, such as:

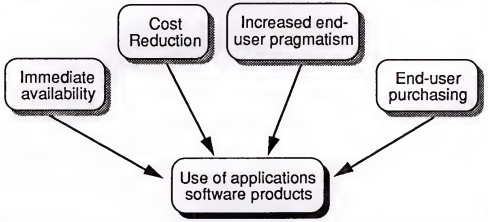
- Reducing development costs
- Reducing the development time-scale
- Reducing the development risk

This acceptance of applications software products seems to be especially heightened in organizations that have undergone downsizing exercises. Some of the driving forces responsible for this are shown in Exhibit 3.

Again, the in-house IS department has traditionally been an adversary of applications software products vendors, preferring to develop the "Rolls-Royce" solution in-house when the "Volkswagen" from the external vendor would have been quite sufficient. As end users become more involved in the

Exhibit 3

Driving Forces
Increased Use of Applications Software Products



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identification of their needs and the procurement of suitable solutions, this results in a greater propensity to choose standard products rather than bespoke solutions. There are even signs that some organizations are increasingly discouraging the modification of standard applications software products.

Another benefit of applications software products is the relative immediacy of their use. One of the main dangers in systems integration projects has always been the possibility of the organization's business strategy, and hence business methods, changing while system development was still under way. In such cases the system became obsolete even before it was implemented.

A Boost for Network Integration

As equipment is increasingly located on a divisional or departmental basis, rather than within a centralized data centre, the need for networking grows both to distribute data more widely within the organization and to enable a greater integration of interdependent systems. As the client/server approach increases in popularity, there will be an increasing, associated need for network integration services. Because in-house IS departments tend to have comparatively low levels of skill in network integration, particularly where UNIX-based systems are involved, this activity—and potentially the subsequent network management—will often be subcontracted to systems integration vendors.

This Research Bulletin is an excerpt from a full research report issued as part of INPUT's Systems Integration Programme—Europe. If you have questions or comments on this bulletin or wish to purchase the report, please contact Peter Lines at INPUT, Piccadilly House, 33/37 Regent Street, London SW1Y 4NF, England. Tel. (071) 493 9335, Fax (071) 629 0179

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INPUT® Research Bulletin

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A Publication from INPUT's Systems Integration Programme—Europe

BT Customer Systems—Becoming a Global Leader in Systems Integration

BT Customer Systems with total revenues of approximately £200 million in 1991 has been described as the largest U.K.-owned supplier of computing services. The company, formed from a large number of individual BT profit centres in 1990, is particularly active in the systems integration market. Throughout its existence, BT Customer Systems has emphasised its desire to be the prime contractor for large, complex projects.

BT Customer Systems now intends to develop into a truly international business and to become one of the leading five vendors worldwide in its chosen markets within five years.

Despite its apparent size, BT Customer Systems has considerable scope to further develop its presence in the systems integration market. Roughly a third of the company's revenues are derived from captive business and over half of the remainder comes from the company's strong position in the public sector. The company's activities are also strongly concentrated in the U.K.

BT Customer Systems' objectives are being addressed by the following strategies:

- Adopting a strong market focus
- Changing its image
- Forming appropriate partnerships.

Targeting Communications-Intensive Activities

Exhibit 1 provides a number of examples of projects undertaken by BT Customer Systems.

It can be seen that these projects reflect BT Customer System's advanced network integration capabilities. Historically, the majority of the company's projects have been network integration projects.

The company's current market foci also reflect its targeting of communications-intensive applications. These foci are

- Solutions related to the interfaces between enterprises, their customers, and their partners, for example,
  - Voice response systems
  - EDI
  - Telemarketing
- Systems that support new organisational structures or cultures, for example,
  - Teleworking systems
  - Corporate messaging/office automation systems
  - Change management consultancy

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Exhibit 1

Typical Projects
BT Customer Systems

Client	Nature of Project
ICI	Global communications infrastructure
BP	Emergency control centre
Mercantile Credit	Network integration between credit reference agency, mainframe, and dealer workstations
Department of Social Security	Strategy Terminal Systems programme
HM Customs and Excise	Customs handling of import and export freight
Digital	Telemarketing system

Source: INPUT

- Systems that assist enterprises in delivering service to their customers, for example,

  - Document image processing
  - Home banking systems
  - Retailing systems.

The principal industries being targeted by BT Customer Systems are

- Banking and finance
- Government—both civil and defence
- Transportation
- Manufacturing.

The company has its own products for the banking sector. These are packaged under the identities Integrated Trading Systems (ITS) and Open Trading Systems (OTS). ITS encompasses switches and dealer boards, whereas OTS provides distribution of data in video or digital form. BT Customer Systems has also developed an advanced cargo processing system for use by airlines, freight forwarders, and customs authorities.

BT Customer Systems views coordination between elements of the "extended enterprise" as a major opportunity within the manufacturing sector.

Overall, BT Customer Systems should be favoured by the increasing adoption of client/server architectures necessitating a greater communications emphasis, and by its own increasing emphasis on business solutions, which provide competitive advantage to their user organisations.

Development of Its Corporate Image

So far, BT Customer Systems has adopted a comparatively low profile in the systems integration market. However, this is going to change. One of the first steps will be a change in company name to reflect more accurately the company's market positioning.

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BT Customer Systems will also endeavour to expand its business skills, building on its depth of technical expertise, to offer business process re-engineering and change management capability. The company perceives that these skills are now vital to ensure that its clients realise the benefits from new information systems. As the skill mix begins to change, so BT Customer Systems may in the future begin to subcontract skills of low-perceived value to the customer, such as programming, allowing the company to concentrate more of its resources on delivering improved business processes to its clients.

Forming Partnerships

Though BT Customer Systems intends to develop its own skills in business process re-engineering and change management, it may need to use partners to supplement its own skills in these areas in the short term. Other areas where the company will need partners are in developing its global market coverage and in obtaining access to advanced technology.

BT already has office locations worldwide and BT Customer Systems will increasingly deploy its own personnel within this infrastructure. However the company will also speed up this process by means of acquisitions should suitable companies become available.

BT Customer Systems has expertise in two important business process re-engineering technologies, namely, telemarketing and image processing. In these areas, the company has developed relationships with a number of suppliers to gain access to a range of products, ensuring that BT Customer Systems does not become tied to a specific platform.

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INPUT's Systems Integration Programme—Europe

Market and industry research and consultancy service supporting the business intelligence, marketing, and planning functions of organisations involved in systems integration.

INPUT's U.S. offices offer a full complement of research and subscription services focused on the U.S. market for systems integration.

Custom Consulting

INPUT conducts over 100 primary research studies for clients every year, many focused on downsizing topics. These have included analysis of product introductions, marketing strategies, competitive analysis and vendor merger/acquisition study. For users, INPUT has evaluated specific applications, costs of downsizing, vendor evaluation and the potential for outsourcing.

About INPUT

INPUT is a worldwide consulting and market research firm uniquely focused on the information technology services and software markets. Executives in many technically advanced companies in North America, Europe, and Japan rely on INPUT for data, objective analysis, and insightful opinions to support their business plans, market assessments, and technology directions. By leveraging INPUT's considerable knowledge and expertise, clients make informed decisions more quickly, and benefit by saving on the cost of internal research.

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Gemini Consulting—Seamless Delivery of Business Transformation

Many systems integration vendors have realized the importance of management consulting in initiating large systems development projects and in establishing credibility at board-level in major corporations. However, few vendors have yet succeeded in establishing access to credible management consulting organizations.

One of the notable exceptions is Cap Gemini Sogeti, which is continuing to strengthen its links with Gemini Consulting. With 1991 revenues of $270 million, Gemini Consulting estimates itself to be ranked third in the global market for *strategy-driven, high-quality management consulting.*

Gemini Consulting attributes its success to

- A strong vision of business transformation
- Its formation as a separate entity
- Its close relationship with Cap Gemini Sogeti.

The Vision of Business Transformation

At a time when management consultancies in Europe have been reducing their headcounts, Gemini Consulting has been expanding rapidly. The company now estimates that it employs 1,150 consultants. Revenues are expected to increase by in excess of 30% during 1992.

Much of this success is attributed to the vision of business transformation. Gemini Consulting perceives that clients are no longer prepared to pay for *good ideas.* Companies wish to become *lean and mean* by transforming their business practices and are only prepared to pay for tangible results.

Gemini Consulting was formed in 1990 from the combination of three consultancies with individual specialisms as shown in Exhibit 1.

However, Gemini Consulting claims that it is no longer interested in isolated projects related

Exhibit 1

Constituents of Gemini Consulting

Organization	Specialism
Mac Group	Strategy formulation
United Research	Operations improvement and change management
Gamma International	Information management

Source: INPUT

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to these individual disciplines. The company is only interested in pursuing multidisciplinary projects that accelerate the business transformation process, generating rapid, measurable results for its clients. The company is no longer in the business of marginal improvements.

In practice, Gemini Consulting estimates that all of its U.S. revenues in 1992 will be earned from business transformation projects, whereas a substantial element of its European 1992 revenues will derive from business transformation activities. This implies business transformation project revenues worldwide in 1992 in excess of $250 million. The U.S. market will account for approximately $175 million of these revenues, the European market accounting for $75 million or more. Within Europe, there is a particular concentration of personnel within the U.K.

Although Gemini Consulting is unable to provide examples of business transformation projects undertaken, the company claims to concentrate on tackling complex problems for Fortune 100 companies or organizations of similar stature.

The principal sectors for which work has been undertaken are

- The manufacturing sector, particularly the oil and gas, and chemical subsectors
- The financial services sector.

Formation as a Separate Entity

Gemini Consulting recognizes Cap Gemini Sogeti's strong need for access to management consulting skills. However, Gemini Consulting perceived the importance of establishing the management consulting unit as an independent entity, believing that a group of 1,000 consultants would have become culturally submerged as part of an organization employing 17,000 personnel.

Gemini Consulting also believed that it was important for the consultancy to become a market leader in its own right. The new organization was likely to fail if it remained a subsidized activity within the Cap Gemini Sogeti organization.

Developing Close Relationships with Cap Gemini Sogeti

Gemini Consulting and Cap Gemini Sogeti will continue to strengthen their links over the next few years. The organizations intend to leverage each other's skills and mutually defend their core business.

Both organizations intend to target a small number of transnational companies. Gemini Consulting's ability to identify major systems integration projects to support its clients business transformation needs are clearly of considerable value to Cap Gemini Consulting. However, Gemini Consulting stresses to its clients its ability *to deliver* business transformation, and not just identify opportunities for business transformation. Accordingly, Cap Gemini Sogeti's development capabilities are of high importance to Gemini Consulting in delivering these benefits.

Both Cap Gemini Sogeti and Gemini Consulting perceive that the leading transnational organizations are seeking suppliers which can deliver business transformation on a global basis.

Although Gemini Consulting typically generates leads for Cap Gemini Sogeti, it is not uncommon for Cap Gemini Sogeti to enlist Gemini Consulting's assistance where it perceives that the client's problem is of wider scope than information services.

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